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(54) PHOTOMASK AND ITS PRODUCTION

the photomask in this case.

(57) Abstract:

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PURPOSE: To enable pattern transfer with high accuracy without generating defocus by forming the photomask in such a manner that the distances in the exposing ray direction from the main surface of the photomask to the front surface of a coated optical material having ruggedness are equaled at all points.

CONSTITUTION: A transparent substrate 1 has a layer 8 having a level difference by a device 7, etc., already formed on a substrate 10 and the main surface 1a along the level difference of the resist film 9 formed along this level difference. The distances in the exposing ray direction from the main surface 1a to the front surface of the resist film 9 are equal at any points on the resist film 9. A pattern layer 5 corresponding to the patterns to be formed on the layer 8 is formed on the main surface 1a. The distances L₁, L₂ from the main surface 1a of the photomask 30 to the front surface of the resist film 9 are equal at all points on the resist film 9 and, therefore, the optical distances are equal and the patterns are transferred with high accuracy on the resist film 9 when the exposure is executed by using

